Region 14 Schools
HVAC Systems Description of Operation and Maintenance

General Description

All air handlers have filter changes completed twice a year using MERV 8 type of air filters. Multiple air filters are duct taped together to form a tight seal and prevent air from by-passing the air filter. Filter racks are tightened to ensure that all the air passes through the filter. Duct-work is cleaned as needed depending on the use of the space. Ductwork serving rooms with large amounts of dust are cleaned more often. The large animal lab air handler unit ductwork, for example, gets cleaned twice a year.

A building management system controls heating and cooling in WMS, Ellis Cark, NHS and a small area of BES. This system allows for remote access from RSD#14 staff and our HVAC Control Contractor. Systems are checked daily during the heating and cooling seasons. HVAC control maintenance and ductwork cleaning are outsourced to outside contractors with service agreements.

Mitchell Elementary School

Mitchell School is heated by a natural gas fired steam boiler. The entire system is original in its design and heats the entire building. Classrooms are heated by cast iron radiators and baseboard heating units. There are no air handlers or ductwork.

Limited areas of the building are air conditioned including two portable classrooms, three classrooms in the preschool area using mini-split systems, the Main Office and the Flanders room. These systems contain air filters that are changed two times per year. Every room at MES has an exhaust fan.

Bethlehem Elementary School

Bethlehem Elementary School is heated by four hot water boilers fueled by oil. Heating is done with a variety of baseboard radiation, air handler units, cabinet unit heaters, and suspended unit heaters. All rooms have an exhaust fan.

Limited areas of the building have air conditioning. The Main Office, the science classroom and two other offices serviced by window air conditioning units.

All air filters are changed twice a year and MERV 8 filters are used. Ductwork is cleaned as necessary.

Woodbury Middle School

Woodbury Middle School is heated by three hot water boilers fueled by natural gas. Heating throughout the building is accomplished using a variety of baseboard radiation, air handler units, cabinet unit heaters, and an energy recovery wheel heat transfer unit. All rooms have an exhaust fan. Air handlers are equipped with outside make up air ductwork. This allows outside air into the building and slightly pressurizes the building. A building project in 2000 updated many parts of the building at that time. Many rooms have individual heating controls.

Air conditioned areas of WMS are the Main Office, Library, 2nd Floor Computer Room, eight classrooms in the West Wing (mini-splits). Other offices have small wing air conditioning units. Filters are changed twice a year using MERV 8 filters.

Ellis Clark

Ellis Clark is heated by two hot water boilers fueled by natural gas. The building is heated by a variety of baseboard radiation, cabinet unit heaters, air handlers, and suspended unit heaters. All rooms have individual heating controls. All rooms have exhaust fans. The entire building is air conditioned except for the large animal lab, shop, six bay garage and conservatory.

All air handler unit air filters are changed twice a year using MERV 8 air filters. Ductwork is cleaned as necessary except for the large animal lab which is cleaned twice a year. Nine air handler units were replaced over the last two years, all units have air conditioning and outside air capabilities.

Nonnewaug High School

Nonnewaug High School has just completed a renovate-to-new project which updated the entire HVAC system. Three natural gas fired boilers heat the building. A variety of baseboard radiation, ceiling radiant heat panels, air handler units, air handlers, and variable refrigerant heat pump units heat the building. The system provides 100% outside air during all seasons.

The entire building is air conditioned. This is accomplished by using the air handler units along with two large Dakin chillers. All air filters are changed twice a year with MERV 8 air filters and duct work is cleaned as necessary. All rooms have exhaust air capabilities.